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ART UNIT	PAPER NUMBER
2665	

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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/724,943	MOHABAN ET AL.
	Examiner	Art Unit	
	Steven HD Nguyen	2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>28 November 2000</u>.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-64* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-39,44-46 and 49-64* is/are rejected.

7)☒ Claim(s) *40-43,47 and 48* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>10/5, 8/5, 1/05 .and 1/02</u>·
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –·
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2.   Claims 1-5, 16, 19-20, 38, 49 and 55-64 are rejected under 35 U.S.C. 102(e) as being

anticipated by Maher, III (USP 6654373).

Regarding claims 1 and 55-56, Maher, III discloses an apparatus for processing data

packets representing voice over Internet Protocol (VoIP) calls in a packet-switched network (Fig

1) comprising one or more VOIP processors (Fig 2) in the packet-switched network, wherein

each of the VOIP processors (Fig 4, Ref 402) executes a voice packet processing operating

system that is configured to monitor or manipulate the packets at a transport layer, a media layer

and a signaling layer of the call (Fig 2 discloses the executing function for modifying the voice

packets according to the instruction from the scanning engine, Col. 2, lines 50 to col. 3, lines 20),

includes a plurality of independently callable primitive software functions that carry out low-

level VOIP packet processing functions (Col. 3, lines 21-49, the programs are executed in order

to modify the voice packets according to the required routing, quality and security purposes), and

executes one or more application programs that provide one or more call processing functions by

selectively calling one or more of the primitive software functions and are independent of any

underlying protocols of an existing network (Col. 3, lines 21-49); means for detecting VoIP

packets that pass through the one or more VoIP processors (Fig 2, Ref 140, col. 5, lines 8-60) and

identifying one or more values of fields in the packets (Col. 2, lines 58-64); means for creating

and storing call state information associated with each call that is represented by the one or more

Voip packets (col. 2, lines 58-64, col. 5, lines 8-60); means for modifying one or more of the

VOIP packets at either the transport layer, the media layer, or the signaling layer as required to

carry out one or more call processing functions of the one or more application programs (Col. 3,

lines 21-49 and col. 7, lines 30 to col. 8, lines 26).

Regarding claims 57-58, Maher, III discloses an apparatus for processing VoIP traffic on

a network comprising one or more physical interfaces (Fig 2) through which Voip packets enter

and leave; a switching interface that receives the VOIP packets from the one or more physical

interfaces for distribution to one or more components of a VoIP system (Fig 4, ref 402); one or

more classification engines (Fig 4, ref 408, col. 5, lines 8-60 and col. 6, lines 15-58) coupled to

the switching interface for classifying the VoIP traffic; one or more processors (Fig 4, Ref 414)

coupled to the switching interface and to the one or more classification engines to receive the

VoIP packets therefrom; a memory (Fig 2, ref 108) accessible to the one or more processors; and

one or more sequences of instructions stored in the memory which, when executed by the one or

more processors, cause the one or more processors to carry out the steps of listening to the VoIP

packets that are passing through the apparatus (Fig 4, ref 410 for detecting voice packets, col. 5,

lines 8-60 and col. 6, lines 15-58) and parsing one or more VOIP packets that are passing

through the apparatus; tracking and storing a state information associated with the one or more

VoIP packets (col. 2, lines 58-64, col. 5, lines 8-60); and executing one or more VoIp

applications of a plurality of VoIP applications that are independent of any underlying protocols

of the network (Col. 2, line 50 to col. 3, line 49, col. 7, lines 30 to col. 8, lines 26).

Regarding claim 59, Maher, III discloses an apparatus for processing VOIP traffic on a

network comprising one or more physical interfaces (Fig 2) through which VOIP packets enter

and leave; a switching interface that receives the Voip packets from the one or more physical

interfaces for distribution to one or more components of a VoIP system (Fig 4, ref 402); one or

more classification engines (Fig 4, ref 408, col. 5, lines 8-60 and col. 6, lines 15-58) coupled to

the switching interface for classifying the VoIP traffic; one or more processors (Fig 4, Ref 414)

coupled to the switching interface and to the one or more classification engines to receive the

VoIP packets therefrom; a memory (Fig 2, ref 108) accessible to the one or more processors, and

one or more sequences of instructions stored in the memory which, when executed by the one or

more processors, cause the one or more processors to carry out the steps of IP processing

associated with one or more VoIP packets of a plurality of VoIP packets at a transport layer;

media processing at a media layer; and call processing at a signaling layer (Col. 2, line 50 to col.

3, line 49, col. 7, lines 30 to col. 8, lines 26).

Regarding claims 60-61, Maher, III discloses an apparatus for processing data packets

representing video over Internet Protocol data in a packet-switched network (Fig 1) comprising

one or more video over Internet Protocol data processors (Fig 2) in the packet-switched network,

wherein each of the video over Internet Protocol data processors executes a video packet

processing operating system (Fig 4, Ref 402) that is configured to monitor or manipulate the

packets at a transport layer, a media layer and a signaling layer (Fig 2 discloses the executing

function for modifying the voice packets according to the instruction from the scanning engine,

Col. 2, lines 50 to col. 3, lines 20), includes a plurality of independently callable primitive

software functions that carry out low-level video over Internet Protocol data packet processing

functions (Col. 3, lines 21-49, the programs are executed in order to modify the voice packets

according to the required routing, quality and security purposes), and executes one or more

application programs that provide one or more video processing functions by selectively calling

one or more of the primitive software functions and are independent of any underlying protocols

of an existing network (Col. 3, lines 21-49); means for detecting video over Internet Protocol

data packets that pass through the one or more video over Internet Protocol data processors (Fig

2, Ref 140, col. 5, lines 8-60) and identifying one or more values of fields in the packets (Col. 2,

lines 58-64); means for creating and storing video state information associated with each video

display that is represented by the one or more video over Internet Protocol data packets (Col. 2,

lines 58-64, col. 5, lines 8-60); means for modifying one or more of the video over Internet

Protocol data packets at either the transport layer, the media layer, or the signaling layer as

required to carry out one or more video processing functions of the one or more application

programs (Col. 3, lines 21-49, col. 7, lines 30 to col. 8, lines 26).

Regarding claims 62-63, Maher, III discloses an apparatus for processing video over

Internet Protocol data traffic on a network (Fig 1) the apparatus comprising one or more physical

interfaces (Fig 2) through which video over Internet Protocol data packets enter and leave; a

switching interface that receives the video over Internet Protocol data packets from the one or

more physical interfaces for distribution to one or more components of a video over Internet

Protocol data system (Fig 4, ref 402); one or more classification engines (Fig 2, ref 104) coupled

to the switching interface for classifying the video over Internet Protocol data traffic; one or

more processors (Fig 2, Ref 116) coupled to the switching interface and to the one or more

classification engines to receive the video over Internet Protocol data packets therefrom; a

memory (Fig 2, Ref 118) accessible to the one or more processors; and one or more sequences of

instructions stored in the memory which, when executed by the one or more processors, cause

the one or more processors to carry out the steps of listening to the video over Internet Protocol

data packets that are passing through the apparatus (Fig 2, ref 104, col. 5, lines 8-60); parsing

one or more video over Internet Protocol data packets that are passing through the apparatus

(Col. 2, lines 58-64); tracking and storing a video state information associated with the one or

more video over Internet Protocol data packets (Col. 2, lines 58-64, col. 5, lines 8-60); and

executing one or more video over Internet Protocol data applications of a plurality of video over

Internet Protocol data applications that are independent of any underlying protocols of the

network (Col. 2, line 50 to col. 3, line 49, col. 7, lines 30 to col. 8, lines 26).

Regarding claims 64, Maher, III discloses an apparatus for processing video over Internet

Protocol data traffic on a network (Fig 1) the apparatus comprising one or more physical

interfaces (Fig 2) through which video over Internet Protocol packets enter and leave; a

switching interface that receives the video over Internet Protocol data packets from the one or

more physical interfaces for distribution to one or more components of a video over Internet

Protocol data system (Fig 4, ref 402); one or more classification engines (Fig 4, ref 410, col. 5,

lines 8-60 and col. 6, lines 15-58) coupled to the switching interface for classifying the video

over Internet Protocol data traffic; one or more processors (Fig 4, ref 414) coupled to the

switching interface and to the one or more classification engines to receive the video over

Internet Protocol data packets therefrom; a memory (Fig 2, ref 118) accessible to the one or more

processors; and one or more sequences of instructions stored in the memory which, when

executed by the one or more processors, cause the one or more processors to carry out the steps

of IP processing associated with one or more video over Internet Protocol data packets of a

plurality of video over Internet Protocol data packets at a transport layer; media processing at a

media layer, and video processing at a signaling layer (Col. 2, line 50 to col. 3, line 49, col. 7,

lines 30 to col. 8, lines 26).

Regarding claim 2, Maher, III discloses one or more of the plurality of independently

callable primitive software functions are selectively called by the one or more application

programs that provide the one or more call processing functions and are independent of any

underlying protocols of an existing network and wherein the one or more application programs

are executed on one or more devices that are separate from the one or more VoIP processors (Fig

2, Ref 116 executes a software to change the bandwidth based on QOS of session ID wherein the

software is executed from a processor that separated from processor 140, Col. 5, lines 55-60 and

col. 7, lines 30-56).

Regarding claim 3, Maher, III discloses one or more of the plurality of independently

callable primitive software functions are selectively called by the one or more application

programs that provide the one or more call processing functions and are independent of any

underlying protocols of an existing network and wherein the one or more application programs

are executed on the one or more VoIP processors (col. 6, lines 55-58 discloses a processor for

executing a software for generating a session ID, routing information).

Regarding claims 4, 16, 19-20, Maher, III discloses one of the plurality of independently

callable primitive software functions comprises modifying by scheduling for routing or

encrypting the one or more VOIP packets at the transport layer (Fig 2, Ref 128, scheduler the

VOIP packets and Col. 8, lines 19-21, packet modifying, col. 2, lines 5-13).

Regarding claim 5, Maher, III discloses one of the plurality of independently callable

primitive software functions comprises dropping at the transport layer the one or more VOIP

packets (Col. 7, lines 41-56).

Regarding claim 38, Maher, III discloses policy decisions associated with VOIP traffic

(Col. 5, lines 33-60).

Regarding claim 49, Maher, III discloses detecting DOS packets by creating and storing

state information with the calls including port numbers and dropping these packet from the

network (Col. 5, lines 51-60 and col. 6, lines 26-32).

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

4.   Claims 6-15, 17-18, 21-37, 39, 44-46 and 50-54 rejected under 35 U.S.C. 103(a) as being

unpatentable over Maher, III (USP 6654373).

Regarding claim 6, 8 and 10, Maher, III fails to disclose one of the plurality of

independently callable primitive software functions comprise injecting at the

transport/media/signaling layer new VOIP packets to augment the one or more VoIP packets.

However, the examiner takes an official notice that a method and system for generating a new

voice packet for injecting into voice stream is well known and expected in the art at the time of

invention was made to apply this method into the system and method of Maher. The motivation

would have been to provide a quality voice signal to the customer and turn the Internet into a

reliable voice network.

Regarding claim 7, Maher, III fails to disclose one of the plurality of independently

callable primitive software functions comprises dropping at the media layer the one or more

VOIP packets. However, the examiner takes an official notice that a method and system for

dropping a packet at media layer is well known and expected in the art at the time of invention

was made to apply this method into the system and method of Maher. The motivation would

have been to prevent the odd packet to degrade the throughput of the system.

Regarding claim 9, Maher, III fails to disclose one of the plurality of independently

callable primitive software functions comprises dropping at the signaling layer the one or more

VoIP packets based on one or more signaling parameters associated with a call signal. However,

the examiner takes an official notice that a method and system for dropping a packet at signaling

layer is well known and expected in the art at the time of invention was made to apply this

method into the system and method of Maher. The motivation would have been to prevent the

duplicated packet to degrade the throughput of the system.

Regarding claims 11-12, Maher, III fails to disclose one of the plurality of independently

callable primitive software functions comprises modifying at the media/signaling layer one or

more media/signaling characteristics of a plurality of media/signaling characteristics associated

with the one or more VOIP packets. However, the examiner takes an official notice that a

method and system for modifying a packet at media/signaling layer are well known and expected

in the art at the time of invention was made to apply this method into the system and method of Maher. The motivation would have been to integrate the different networks into Internet.

Regarding claims 13-15 and 17-18, Maher, III fails to disclose modifying at the transport layer the one or more VOIP packets further comprises duplicating, marking, label, rerouting, tunneling the one or more VoIP packets at the transport layer. However, the examiner takes an official notice that a method and system for duplicating, marking, labeling the one or more VoIP packets at the transport layer are well known and expected in the art at the time of invention was made to apply this method into the system and method of Maher. The motivation would have been to turn the internet into a reliable telecommunication network.

Regarding claims 21-28, Maher, III fails to disclose modifying at the media layer one or more media characteristics comprises compressing headers, changing a codec, decoding, re-encoding, duplicating, reconstruction, rerouting, a media stream associated with the one or more VOIP packets; aggregating the one or more VoIP packets under a single Real--rime Transport Protocol header when the one or more VoIP packets share a common sub-route. However, the examiner takes an official notice that a method and system for compressing headers, changing a codec, decoding, re-encoding, duplicating, reconstruction, rerouting, a media stream associated with the one or more VOIP packets; aggregating the one or more VoIP packets under a single Real--rime Transport Protocol header when the one or more VoIP packets share a common sub-route at media layer are well known and expected in the art at the time of invention was made to apply this method into the system and method of Maher. The motivation would have been to turn the internet into a reliable telecommunication network.

Regarding claims 29-37 and 44-46, Maher, III fails to disclose translating signaling protocols, CDR such call length, quality, number transmitted packets, service granted, quality, IP detail record, mapping the fields of signaling message with the VOIP packet, RSVP, rerouting, redirecting based on load balancing function between the gateways, duplicating, aggregating call signals, maintaining open signaling tunnel between the processors. However, the examiner takes an official notice that a method and system for translating signaling protocols, CDR, IP detail record, mapping the fields of signaling message with the VOIP packet, RSVP, rerouting, redirecting based on load balancing function, duplicating, aggregating call signals, maintaining open signaling tunnel between the processors are well known and expected in the art at the time of invention was made to apply this method into the system and method of Maher. The motivation would have been to turn the internet into a reliable telecommunication network.

Regarding claims 39, Maher, III fails to disclose call aggregation function for aggregating the packets of a same call into one aggregated packet. However, the examiner takes an official notice that a method and system for aggregating the packets of same call into one packet is well known and expected in the art at the time of invention was made to apply this method into the system and method of Maher. The motivation would have been to turn the Internet into a reliable telecommunication network.

Regarding claim 50, Maher, III fails to disclose detecting loss of at least one packet associated with a plurality of packets associated with a call that is passing through the one or more VoIP processors; creating and storing a reconstructed packet to replace a lost packet based on characteristics of other packets within the plurality of packets; and forwarding the reconstructed packet in place of the lost packet among the plurality of packets associated with

the call. However, the examiner takes an official notice that a method and system for generating a new voice packet for replacing the lost voice packet based on the preceding voice packets is well known and expected in the art at the time of invention was made to apply this method into the system and method of Maher. The motivation would have been to turn the Internet into a reliable telecommunication network.

Regarding claims 51-52, Maher, III fails to disclose the voice packet is encrypted and decrypting at the receiver and source of VOIP processors before forwarding the voice; differentiated services application and further comprising the steps of under control of the differentiated services application, carrying out one or more operations selected from among: setting a priority value of all packets associated with a specified call; accepting a resource reservation request based on one or more policies; denying the resource reservation request based on one or more policies. However, the examiner takes an official notice that a method and system for setting priority and accepting/denying the request of resource reservation based on the policies and encrypting/decrypting function at source and destination VOIP processors are well known and expected in the art at the time of invention was made to apply this method into the system and method of Maher. The motivation would have been to turn the Internet into a reliable telecommunication network.

Regarding claims 53-54, Maher, III fails to disclose a step of generating a duplicating packet based on the request of law enforcement and forwarding to a tapping application in order to reconstruct the call and logically coupling the one or more VoIP processor to a plurality of service providers that can send and receive calls destined or originating outside the packet-switched network; receiving service selection information that identifies one of the plurality of

service providers that has been previously selected by a calling party associated with a specified

call that is passing through the VOIP processor; forwarding all packets associated with the

specified call to one of the plurality of service providers based on the service selection

information. However, the examiner takes an official notice that a method and system for

allowing the subscriber to select the services for making/receiving an outgoing/incoming call

from wireless "mobile" or wireline "PSTN" and duplicating voice packet based on requesting of

the law enforcement are well known and expected in the art at the time of invention was made to

apply this method into the system and method of Maher. The motivation would have been to

turn the Internet into a reliable telecommunication network.

Allowable Subject Matter

5.   Claims 40-43 and 47-48 objected to as being dependent upon a rejected base claim, but

would be allowable if rewritten in independent form including all of the limitations of the base

claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Steven HD Nguyen whose telephone number is (571) 272-3159.

The examiner can normally be reached on 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Huy D. Vu can be reached on (571) 272-3155. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Steven HD Nguyen
Primary Examiner
Art Unit 2665
November 21, 2005